

*Phacelia hubbyi* (J. F. MacBr.) L. M. Garrison, HUBBY'S PHACELIA. Annual, taprooted, not rosetted, 1–several-stemmed at base, typically branching at each cauline node, ascending to erect, 20–145 cm tall; shoots with only cauline leaves, hirsute and densely glandular-pubescent, with a mix of nonglandular and glandular hairs, the hirsute hairs soft to weakly hispid. Long hairs mostly 1.5–4 mm long, spreading to slightly bend downward, bulbous, the longest ones having bulbous bases, the glandular hairs stalked with amber heads, erect,  $\geq$  long nonglandular hairs, the short nonglandular hairs erect, to 0.3 mm long, and bent slightly downward. **Stems:** cylindric or ridged, to 15 mm diameter, with a pair of ridges descending from each cauline leaf (robust shoot), never straight, green aging dark purplish red at base or also on vigorous growth; solid. **Leaves:** helically alternate, odd-1(–2)-pinnately compound with 2–5 deeply lobed lateral leaflets per side, sometimes with a small lobed between larger lobes, having an irregularly dissected and deeply lobed terminal leaflet, lateral leaflets opposite to alternate, generally petiolate but sometimes with a sessile, diminutive basal leaflets, without stipules; petiole channeled above with narrow groove, (short–)15–100 mm long (scaling with blade size), green but often reddish; rachis grooved like petiole, 12–80 mm long; blade oblong to ovate in outline, 60–200  $\times$  30–145 mm; petiolules  $<$  3.5 mm long on lower leaflets to sessile above; lateral leaflets oblong or obovate to narrowly ovate or broadly elliptic, 8–64  $\times$  3–27 mm, dull, with 2–5 lobes per side, asymmetric with larger lobes on trailing side, toothed on margins, pinnately veined with principal veins sunken on upper surface and conspicuously raised on lower surface; small intervening leaflet like lobes oblong to narrowly ovate,  $<$  10 mm long; terminal leaflet 3-lobed or 5(7)-lobed,  $\pm$  rhombic to ovate, 15–65  $\times$  10–45 mm long, pinnately veined, toothed on margins. **Inflorescence:** compound cyme, terminal on main and each lateral shoot, of 5–9 cymes (major inflorescences), subtended by upper cauline leaf,  $\pm$  condensed and ball-like, 15–45 mm across, initially with closely arranged, ascending branches, smaller on lateral shoots; peduncle cylindric, typically  $<$  80 mm long, with short ascending to descending hairs, the branches forked, unequal at lower branches; each cyme many-flowered, 1-sided, with flowers in 2 rows, initially densely coiled and in fruit open and divergent, uncoiling from base to tip; bractlet subtending pedicel absent; flower subsessile with pedicel ca. 2 mm long at anthesis increasing 2 $\times$  in fruit; when young soft hairy, pilose-hirsute and densely glandular-puberulent, the long hairs to 5 mm and  $\pm$  straight with thickened bases but lacking a purple ring on surface, the short nonglandular hairs  $<$  0.3 mm long, the glandular hairs 0.3–0.6 mm long, with amber heads. **Flower:** bisexual, radial, 8–11 mm across; **calyx** 5-lobed, fading to  $\pm$  green or with purple tips in fruit, long-hirsute and pubescent with nonglandular and glandular hairs; tube shallowly cup-shaped,  $<$  1 mm long, light green to pale green, densely pubescent; lobes in bud extending above corolla, at anthesis subequal with 1 wider lobe linear, 4–6.3  $\times$  0.5–0.6 mm, other lobes oblanceolate-linear, 0.8–1 mm wide, each increasing nearly 2 $\times$  and linear in fruit,  $\pm$  greenish with purple and at acute tips (rounded), externally bumpy from hair bases, inner surface smoother, pubescent, and generally without hirsute hairs; **corolla** 5-lobed, broadly funnel-shaped, 6.5–8 mm long,  $\pm$  pale lavender with conspicuous darker veins; tube + throat 4.5–5.5 mm long, the lower portion barrel-shaped, light yellow to whitish before anthesis aging purplish pink, with sets of 3 parallel dark veins to each lobe and a rose-purple patch opposite each filament base, the upper portion (throat) white to light yellow aging purplish pink or lavender, with an intricate network of dark veins starting above scales, in bud with 5 conspicuous, vertical dimples on throat opposite and concealed by calyx lobes and just below sinuses; lobes spreading with lateral margins

overlapping, circular to depressed ovate, 2–3.5 × 3.7–5.5 mm long, purplish pink to lavender with an intricate network of dark veins, throat and lower surface of lobes either pubescent or glabrous or sometime lobe pubescence may vary within the corolla, with 2 scales fused to each stamen base; scale semi-vate, with 1 edge fused to corolla for 1.7–2.7 mm, translucent but rose-purple on margin, the free margin descending in a curved fashion from the point of attachment with the corolla to the pistil side of filament, so paired scales form a collared neck around the base of each filament; **stamens** 5, fused to base of corolla tube, exserted; filaments hooked in bud becoming straight at anthesis, unequal, 6.5–11 mm long, light lavender at base to top of scales and whitish above, glabrous; anthers versatile, conspicuously dithecal, 1–1.5 mm long, deep purple, longitudinally dehiscent; pollen light purple; **nectary disc** beneath ovary, saucerlike with scarcely a free margin, ± pentagonal with rounded angles, 1 mm wide, dark green; **pistil** 1; ovary superior, ± spheric to depressed ovoid, 0.6–1.2 × 0.7–1.5 mm, green, densely hirsute above midpoint with ascending, stiff hairs having bulbous bases, 2-chambered, each chamber with 2 ovules; style long-exserted (exserted before filaments straighten), ascending to arching, 8–12 mm long, 2-branched just below midpoint, hirsute and with stalked glandular hairs below branches, the branches spreading, tapered to tip, 5–6.5 mm long, whitish but purplish approaching stigma; stigmas terminal, minute. **Fruit:** capsule, loculicidal, dehiscent by 2 valves, (2–)4-seeded, depressed-spheroid, 2.4–3 mm, whitish with purple rings when immature, aging dull brown, shallowly 2-lobed with 2 low ridges bearing stiff hairs having bulbous bases and many shorter nonglandular and glandular hairs; inflorescence erect after flowering, fruit-bearing axis to 110 mm long. **Seed:** 1/4-sphere (= 2 concave faces and outer face convex), 2.8–3.2 × 1.45–1.8 mm, reddish brown to dark brown, deeply pitted and netlike with angles of network pointed, pits often containing resin. Mid-January–early July.

Native. Annual growing in dense local patches in grassy habitats or on open slopes in chaparral in SMM and SH, with its largest populations occurring in SMMNRA Palo Comado, where entire slopes may be covered by this species. *Phacelia hubbyi*, until fairly recently, was treated as a poorly known variety of *P. cicutaria*, but certainly deserves to be recognized as a distinct species that exhibits soft-hairy, ball-like cymes. Seeds of *P. hubbyi* are very similar to those of *P. distans* and easily distinguished from *P. cicutaria* var. *hispida*, which are shorter and lighter in color.

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